

ABSTRACT OF THE DISCLOSURE

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The invention is, in its various aspects, a method and apparatus for dynamically generating trace data reports in a semiconductor fabrication process employing fault detection control. The method comprises specifying data for a trace data report, the specified data including at least one of a parameter, a trigger, and a frequency for the trace data report; automatically generating from a fault detection controller a request to a report generator for the trace data report, the request including the specified data; formulating the trace data report responsive to the request; and returning the formulated trace data report from the report generator based on the request. In other aspects, the invention comprises a computer programmed to perform this method and a computer-readable, program storage medium encoded with instructions that perform this method when executed by a computer. The apparatus is a semiconductor fabrication processing system, comprising: a fabrication tool capable of providing at least one of specified data and a trace data report; a fault detection controller implementing a fault detection control, the fault detection controller being capable of automatically generating a request for the trace data report, the request including the specified data; a report generator capable of requesting at least one of the specified data and the trace data report from the fabrication tool and capable of, if the specified data is requested from the fabrication tool, providing the trace data report; and an operator interface for receiving data specified for the trace data report, the specified data including at least one of a parameter, a trigger, and a frequency for the trace data report, and to which the trace data report may be returned from at least one of the report generator and the fabrication tool.